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Leadership as social identity management: Introducing the Identity Leadership Inventory (ILI) to assess and validate a four-dimensional model ☆

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ABSTRACT

Although nearly two decades of research have provided support for the social identity approach to leadership, most previous work has focused on leaders' identity prototypicality while neglecting the assessment of other equally important dimensions of social identity management. However, recent theoretical developments have argued that in order to mobilize and direct followers' energies, leaders need not only to 'be one of us' (identity prototypicality), but also to 'do it for us' (identity advancement), to 'craft a sense of us' (identity entrepreneurship), and to 'embed a sense of us' (identity impresarioship). In the present research we develop and validate an *Identity Leadership Inventory* (*ILI*) that assesses these dimensions in different contexts and with diverse samples from the US, China, and Belgium. Study 1 demonstrates that the scale has content validity such that the items meaningfully differentiate between the four dimensions. Studies 2, 3, and 4 provide evidence for the scale's construct validity (distinguishing between dimensions), discriminant validity (distinguishing identity leadership from authentic leadership, leaders' charisma, and perceived leader quality), and criterion validity (relating the ILI to key leadership outcomes). We conclude that by assessing multiple facets of leaders' social identity management the ILI has significant utility for both theory and practice.

Questions of collective self and identity (e.g., "Who are we?", "What do we stand for?", "How will we progress?") are at the heart of collaborative human enterprise. Not least, this is because the answers to such questions are crucial to leaders' attempts to mobilize and shape the energies of potential followers. Nevertheless, despite the readily apparent relevance of these questions to issues of leadership and followership, relatively little leadership research has placed these issues center stage and attempted to build theory around them (Akerlof, 2011; Dinh et al., 2014; Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010).

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There are however, some notable exceptions to this observation. Most particularly, two theories that have placed issues of group process at the cornerstone of the analysis of leadership are *social identity theory* (Tajfel & Turner, 1979) and *self-categorization theory* (Turner, 1991; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Turner, Oakes, Haslam, & McGarty, 1994) — theories which, together, comprise the *social identity approach* (Haslam, 2001/2004; Postmes & Branscombe, 2010; Reicher, Spears, & Haslam, 2010; Tyler & Blader, 2003). In answer to the question "who am I?", self-categorization theory suggests that a person's subjective sense of self can be defined at varying levels of abstraction (Turner, 1985). At one level, these definitions involve conceptions of the self as a unique individual (in terms of *personal identity* as 'I' and 'me'; Turner, 1982), but at another they involve more inclusive definitions based on shared group memberships (in terms of *social identity* as 'us' and 'we'). Importantly, self-categorization in terms of social identity (i.e., where the self is defined in terms of shared group membership) is argued to underpin behavior that is qualitatively distinct from that which is predicated on personal identity because it is shaped by, and oriented toward, the interests of the group as a whole. Indeed, more generally, self-categorization theory asserts that it is individuals' internalized sense of shared identity (their sense of themselves as part of 'us') that "makes group behavior possible" (Turner, 1982, p. 21; see also Albert & Whetten, 1985; Ashforth & Mael, 1989; Ellemers, 2012; Ellemers, Spears, & Doosje, 2002; Haslam, Postmes, & Ellemers, 2003; Hogg & Terry, 2001).

The social identity approach to leadership

The theoretical assertion that social identity makes possible all meaningful forms of group behavior provides the conceptual basis for a novel analysis of leadership. Indeed, building on the foregoing insights, the social identity approach asserts that leadership is a recursive, multi-dimensional process that centers on leaders' capacities to represent, advance, create, and embed a shared sense of social identity for group members (Haslam, Reicher, & Platow, 2011; Hogg, 2001; Reicher, Haslam, & Hopkins, 2005; Turner & Haslam, 2001; van Knippenberg & Hogg, 2003; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004). This is because it is by developing and directing a shared sense of 'us' that leaders are able to galvanize individuals' otherwise idiosyncratic motivations and to harness the transformative power of their coordinated energies (Ellemers, de Gilder, & Haslam, 2004; Reicher et al., 2005; Turner, 2005). Importantly, from this perspective, successful leadership is a process of social influence (something that does not reside in a position, a person, or a result) that involves making followers *want* to contribute to shared goals (see also House, Javidan, & Dorfman, 2001).

Yet despite the multi-faceted nature of this approach, previous empirical work that has been informed by this body of leadership theory has tended to be somewhat narrow in scope. In particular, research and theory have tended to focus on the importance of leaders being seen to be representative — or *prototypical* — of the groups they seek to lead such that they are seen to embody those attributes that characterize a particular ingroup and make it distinct from other groups[1] (after Rosch, 1978; Turner, 1985; for reviews see van Knippenberg, 2011; van Knippenberg & Hogg, 2003). The focus on this aspect of the leadership process reflects Turner's (1991) original insight that it is by being representative of shared group interests that individuals are able to exert *influence* over other group members. In line with this claim, recent comprehensive reviews by Haslam et al. (2011), van Knippenberg (2011), and Hogg, van Knippenberg, and Rast (2012) demonstrate that leader prototypicality contributes to a range of important leadership outcomes including (a) perceived leader fairness (De Cremer, van Dijke, & Mayer, 2010; Koivisto, Lipponen, & Platow, 2013; Platow, Hoar, Reid, Harley, & Morrison, 1997), (b) endorsement of leaders (Ullrich, Christ, & van Dick, 2009), (c) trust in leaders (Giessner & van Knippenberg, 2008), and (d) perceived leader charisma (Platow, van Knippenberg, Haslam, van Knippenberg, & Spears, 2006; Steffens, Haslam, & Reicher, 2014). Nevertheless, it is apparent that, as well as representing shared social identity, leaders often must first create this sense of commonality through acts of *identity entrepreneurship* (Reicher & Hopkins, 1996a; Reicher & Hopkins, 2001; Reicher et al., 2005) and then also have to work to *promote* the group through acts of *identity advancement* (Haslam & Platow, 2001). Finally, they also need to embed the group within members' lived experience through acts of *identity impresarioship* (Haslam et al., 2011). Thus, as we argue in more depth below, while clearly very important, prototypicality is certainly not the be-all and end-all of identity leadership.

At the same time, the social identity approach to leadership has also been hampered by two interrelated methodological weaknesses. The first of these relates to the fact that, to date, researchers have lacked a validated measurement tool to assess various aspects of identity leadership. This contrasts starkly to the predicament of those who work with other prominent leadership theories, for which a range of measurement tools are available, and where the development of reliable and valid measurement tools has facilitated theoretical and empirical progress (Schriesheim & Cogliser, 2009). This is true, for example, in the case of work on (a) transformational leadership (where researchers use the Transformational Leadership Inventory, *TLI*; Podsakoff, MacKenzie, Moorman, & Fetter, 1990; or the Multifactor Leadership Questionnaire, *MLQ*; Bass & Avolio, 2004), (b) leader–member exchange (where researchers use the Leader–Member–Exchange 7-Scale, *LMX-7*; Graen & Uhl-Bien, 1995; or the multidimensional LMX scale; Liden & Maslyn, 1998), and (c) authentic leadership (where researchers use the Authentic Leadership Inventory, *ALI*; Neider & Schriesheim, 2011; or the Authentic Leadership Questionnaire, *ALQ*; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Second, there is also some confusion about the precise meaning of prototypicality that, in turn, has resulted in measurement inconsistencies. As several recent reviews (Bartel & Wiesenfeld, 2013; Hogg et al., 2012; van Knippenberg, 2011) have pointed out, it is a mistake to equate leader prototypicality simply with being maximally similar to other group members or with being an average group member. For rather than relating to the average-type, prototypicality relates more to the *ideal-type* of what it

[1] Importantly, the present concept of leaders' identity prototypicality differs from leader prototypicality (or stereotypicality) developed within leader categorization theory (e.g., Lord & Brown, 2004; Lord, Foti, & De Vader, 1984) that refers to the extent to which a leader is seen to be representative of *leaders* in general (i.e., of the category of a leader rather than the particular group that a leader is leading).

means to be 'one of us' (van Knippenberg, 2011, p. 1079; see also Steffens, Haslam, Kessler, & Ryan, 2013). Among other things this means that the prototypical position in the group shifts depending on features of the context at hand (e.g., who 'we' compare ourselves with, and what dimensions of comparison are salient, as specified by the meta-contrast ratio; Turner, 1985; see also Haslam, Turner, Oakes, McGarty, & Hayes, 1992). This means, for example, that what it means to be a 'good' psychologist varies as a function of whether psychologists are being compared with philosophers or with physicists (van Rijswijk, Haslam, & Ellemers, 2006). Moreover, prototypicality can also diverge from a position of maximal similarity when we consider the way in which *time* and *spatial* dimensions shape prototypicality. This is because who 'we' are and what 'we' means is determined not only by who we are in the present but also by who we were in the past as well as who we want to become in the future (Reicher & Hopkins, 2003).

Specifying multiple dimensions of identity leadership

To address these various issues, and thereby, enhance the utility of the social identity approach to leadership, in the present paper we seek to develop and validate a new instrument — the *Identity Leadership Inventory* (the *ILI*) — with the aim of providing a more comprehensive and firmer basis for future investigations of the various dimensions of leadership as a social identity process. This centers on the assessment of the four dimensions of identity leadership — represented schematically in Fig. 1 — that we have been discussing. However, before continuing, it is useful to clarify these in more detail.

Identity prototypicality: Being one of us

As observed above, the measures of prototypicality that have been deployed in previous research do not always map clearly onto the theoretical specifications of self-categorization theory (Turner, 1985), in part because the measures often speak to a leader's 'similarity' or 'averageness' rather than their 'specialness'. For instance, the (arguably most) widely used measures developed by Platow and van Knippenberg (2001) and van Knippenberg and van Knippenberg (2005) include several items that are ambiguous in this sense (e.g., "This leader is a good example of the kind of people that are members of [this group]"; "This leader has a lot in common with the members [of this group]"; "This leader stands for what people [in this group] have in common"; "This leader is very similar to most people [in this group]"). This is potentially problematic because, as well as contributing to measurement inaccuracy, such usage can promote a mistaken belief that a leader's prototypicality (or representativeness) is independent of, or indeed excludes, his or her capacity to be an *exemplary* group member (e.g., by embodying a shared vision; for discussions along these lines see Halevy, Berson, & Galinsky, 2011; Hogg et al., 2012).

In the present research we thus define — and will attempt to assess — prototypicality as follows:

> *Representing the unique qualities that define the group and what it means to be a member of this group. Embodying those core attributes of the group that make this group special as well as distinct from other groups. Being an exemplary and model member of the group.*

Identity advancement: Doing it for us

Although leaders will generally be more effective to the extent that they are seen to be 'one of us', they also need to 'do it for us' by promoting the shared interests of the group that they are leading (Haslam & Platow, 2001; Haslam et al., 2001; for a review

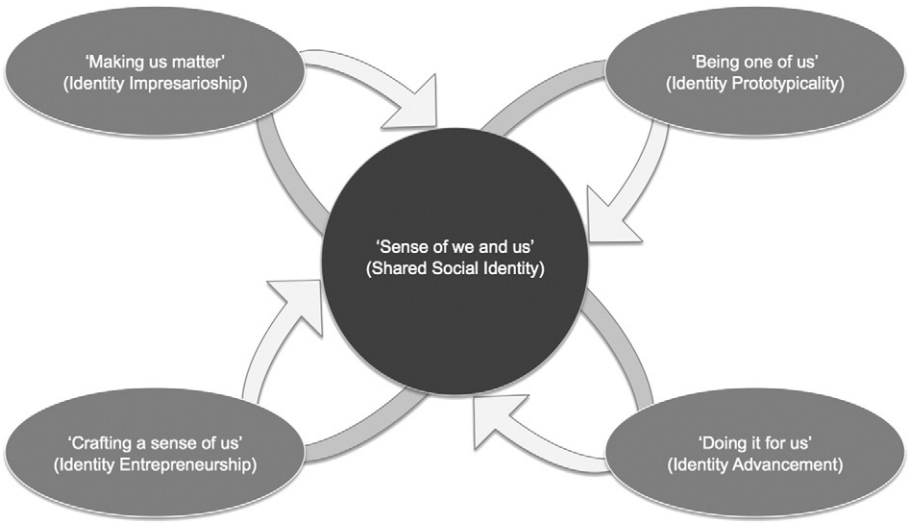

Fig. 1. A four-dimensional model of social identity management comprising identity prototypicality, advancement, entrepreneurship, and impresarioship.

see Haslam et al., 2011). In these terms, it has been argued and empirically demonstrated that leaders are more effective to the extent that they are seen to be acting as *ingroup champions*; that is, if they are seen to be acting in ways that serve their ingroup's interests, rather than their personal interests or those of other outgroups (e.g., Duck & Fielding, 2003; Giessner, van Knippenberg, van Ginkel, & Sleebos, 2013; Haslam et al., 2001; Jetten, Duck, Terry, & O'Brien, 2002; van Dick, Hirst, Grojean, & Wieseke, 2007; van Knippenberg & van Knippenberg, 2005). Here it is worth pointing out that behaving in ways that advance shared group interests and ambitions is clearly not the same as being seen as prototypical of the ingroup (Halevy et al., 2011; van Vugt, Hogan, & Kaiser, 2008): a leader who is working to promote our collective interests and goals need not be a prototypical member of the group, just as a leader who is seen to be 'one of us' may not act in ways that promote core group interests (see also Hogg & van Knippenberg, 2003). Yet while this concept of leaders' identity advancement has received some research attention in the social identity tradition (albeit far less than prototypicality), research has typically focused on manipulating leaders' identity advancement rather than on assessing the extent to which leaders are actually seen to be 'doing it for us'.

In this context it is also worth noting that the importance of leaders' promotion of collective (rather than personalized) interests has been recognized to be important by other theoretical approaches to leadership (Bass & Riggio, 2006; Conger & Kanungo, 1998; Shamir, House, & Arthur, 1993). Yet, as a point of difference, these have tended to appraise leaders' actions with reference to generic higher-order entities (e.g., transcending 'self-interests' by promoting those of other individuals, humans as a whole) rather than with reference to the interests of a particular contextually salient ingroup. Moreover, and counteracting common misconceptions, it is important to note that advancing shared ingroup interests does not necessarily involve derogating outgroups or treating these unfairly. This is because, ultimately, the particular forms of group behavior that an ingroup values and encourages are shaped by the *content* of its shared identity and its relationship with other groups (e.g., as members of Red Cross, the more we advance our collective interests, the more we help people in need; Jetten, Spears, & Manstead, 1996). At the same time, leaders clearly fail to be seen as ingroup champions to the degree that they are seen to advance either (a) the interests of another group (e.g., when a national leader is seen to advance the interests of their party rather than those of the nation) or (b) their personal self-interest.

From a social identity perspective, identity advancement of a collective identity on the part of leaders is, therefore, an important dimension to assess in its own right, and based on the range of meanings discussed by Haslam et al. (2011), we can do this with reference to the following definition:

> *Advancing and promoting core interests of the group. Standing up for, and if threatened defending, group interests (and not personal interests or those of other groups). Championing concerns and ambitions that are key to the group as a whole. Contributing to the realization of group goals. Acting to prevent group failures and to overcome obstacles to the achievement of group objectives.*

Identity entrepreneurship: Crafting a sense of us

Whereas a leader's prototypicality for a particular group has often been treated as more or less given, research by Reicher, Hopkins, and colleagues has argued that the construction of shared identity and associated notions of prototypicality are both negotiable and actively constructed by leaders (Hopkins & Reicher, 1997; Reicher et al., 2005; Reicher & Hopkins, 1996a, 1996b; 2001; 2003). Among other things, then, leaders actively develop their own prototypicality as a function of their success in defining values, norms, and ideals that give a group shared meaning for its members. Along these lines, at the most basic level, it has been argued and shown that unless followers have a sense that they are part of a common ingroup, leaders' efforts to try to mobilize their collective energies are likely to fail (Haslam & Reicher, 2007). It thus follows, as Reicher and Hopkins (2001) argue, that leaders routinely need to act as *identity entrepreneurs* such that their words and deeds serve to craft a sense of shared identity among followers. More specifically, leaders need to work to create and maintain a coherent sense of 'we' and 'us' and also to define what 'us' means (and does not mean) for followers (Augoustinos & De Garis, 2012; Hogg & Giles, 2012; Klein & Licata, 2003; Seyranian & Bligh, 2008; Steffens & Haslam, 2013). Indeed, it has been argued that entrepreneurship involves different facets including leaders' efforts (a) to define the *boundaries* of an identity (who 'we' are, and are not) and thereby to make people feel part of the same group (or not) and (b) to define the *content* of an identity (what 'we' stand for, and do not), for example, by invoking particular contexts or comparisons in the present or past; Reicher et al., 2005)[2].

In line with recent discussions of this aspect of identity leadership (Haslam et al., 2011; Reicher et al., 2005), we thus define leaders' identity entrepreneurship as involving:

> *Bringing people together by creating a shared sense of 'we' and 'us' within the group. Making different people all feel that they are part of the same group and increasing cohesion and inclusiveness within the group. Clarifying people's understanding of what the group stands for (and what it does not stand for) by defining core values, norms, and ideals.*

Identity impresarioship: Making us matter

The previous three aspects of representing, advancing, and crafting shared social identities should all be important determinants of a leader's capacity to engage with group members. Ultimately, though, leaders also need to deliver concrete

[2] Here, we would like to note that Reicher et al. (2005) have pointed out that leaders' identity entrepreneurship has implications for, and can also be used to enhance, their prototypicality. While this may be true in some cases, in the present definition of identity entrepreneurship, we merely focus on crafting and changing an identity without making any claims about the inferences that this has for the relationship between the leader to the group.

outcomes for the group and 'make us matter'. That is, they need to engage in activities and produce outcomes that allow group members to live out their group membership in meaningful ways. Refining insights from previous work which points to the importance of initiation of structure (Fleishman & Peters, 1962; see also Judge, Piccolo, & Ilies, 2004), this means that leaders need to create material realities that are consistent with, and serve to embed, a shared identity, thereby not just 'talking the talk' of 'us', but also 'walking the walk'.

As discussed in depth by Haslam et al. (2011), a critical way in which leaders achieve this is through acts of *identity impresarioship* (e.g., establishing structures, implementing practices, formalizing rituals, and organizing events) that serve to embed and naturalize a shared sense of 'us', thereby giving weight to the group's existence and making it matter in the world at large. Along these lines, impresarioship involves initiating group structures, practices, and activities that (a) are oriented to internal reality and allow group members to live out, and to derive meaning from, their group membership (e.g., a political meeting) and (b) are oriented to external reality and allow the group as a whole to be effective and successful and to have an impact on other groups and the world at large (e.g., a political demonstration).

Informed by these discussions, we can attempt to assess this fourth aspect of identity leadership as involving the following:

> *Developing structures, events, and activities that give weight to the group's existence and allow group members to live out their membership. Promoting structures that facilitate and embed shared understanding, coordination, and success (and not structures that divide or undermine the group). Providing a physical reality for the group by creating group-related material and delivering tangible group outcomes. Making the group matter by making it visible not only to group members but also to people outside the group.*

The present research

To develop and validate the ILI, the present research centers on four studies. The first study involves the generation, refinement, and selection of scale items. The next three studies then seek to validate this instrument by examining its content, construct, and criterion validity in various contexts and with different groups. To keep the paper as short as possible, we provide only brief Introductions and Discussions for each study. However, we provide an integrated summary of the findings across all studies in the General discussion. Our analysis concludes with a discussion of recommendations for the ILI's use and an outline of future research that might put this instrument to good use.

To enhance the ILI's content and construct validity, we followed guidelines prescribed by Gehlbach and Brinkworth (2011) for scale item creation and those laid out by Schriesheim and Cogliser (2009; see also Hinkin, 1998; Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993) as well as Kaplan and Saccuzzo (2009) for scale validation. The process of creating items involved a number of steps starting with a detailed review of the literature (along lines outlined above; see also Haslam et al., 2011). The research team then made suggestions for multiple items for each of the four dimensions before discussing and refining them further in several iterations. Afterwards, the items were presented to social and organizational psychologists to seek further feedback on their construct clarity and comprehensibility and refined further. Given that we placed particular emphasis on developing a clear theoretical foundation and followed commonly best practices in generating our items (Gehlbach & Brinkworth, 2011), we settled for 20 items that we sought to test with the aim of reducing these to no more than four items for each of the four sub-scales.

The 20 items that were examined in our initial study included four items for *prototypicality* (e.g., "This leader embodies what the group stands for"), six items for *advancement* (e.g., "This leader promotes the interests of members of the group"), five items for *entrepreneurship* (e.g., "This leader makes people feel as if they are part of the same group"), and five items for *impresarioship* (e.g., "This leader devises activities that bring the group together")[3]. For the sake of consistency, throughout the present paper we discuss these four dimensions and present corresponding results in this order. The full list of the final 15 ILI items that were ultimately shown to best represent the four dimensions are presented in Appendix A.

Study 1: Item generation and content validation

As indicated above, the first phase of ILI construction involved the research team generating 20 items to assess each of the four dimensions of identity leadership. The preliminary exploration of these involved asking a sample of non-expert participants to indicate the extent to which each item appeared to represent each dimension of identity leadership (following procedures recommended by Neider & Schriesheim, 2011; Schriesheim et al., 1993) and then using this feedback to refine the items further for use in subsequent phases of scale validation.

Method

Participants

Two-hundred-and-seventy-five participants from the US general population voluntarily took part in this online study for a small reimbursement after being recruited via AMAZON MTurk (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, &

[3] In order to enhance the clarity of the identity impresarioship dimension, these items relate primarily to the internal (rather than the external) process of allowing group members to live out their shared identity.

Cheema, 2013). Thirty-seven participants failed to respond appropriately to the two control questions (e.g., "This is a control question — please select 2") and were excluded from analysis, thereby reducing the final sample size to 238. Participants ranged in age from 18 to 72 years ($M = 31.52$, $SD = 11.70$) and 41% were female. Seventy-two percent were currently full-time employed and 17% had been employed in the last 12 months. Participants' average work experience was 11 years ($SD = 9.22$).

Design and procedure

Participants were asked to carefully read the theoretical definitions for each of the four leadership dimensions of the social identity approach to leadership as specified above before assessing the extent to which each item was representative of the above definition of each of the four dimensions ("Please rate the extent to which each statement describes each dimension: 1. Being one of us; 2. Doing it for us; 3. Crafting a sense of us; and 4. Making us matter") using 7-point Likert scales ranging from 1 (*not at all representative*) to 7 (*completely representative*). To avoid order effects and to minimize inferences on the basis of the preceding items, items for each dimension were administered in alternating order (such that an entrepreneurship item was followed by a prototypicality item, then an advancement item, and then an impresarioship item; for a similar procedure, see Neider & Schriesheim, 2011).

Analysis

We first conducted one-way ANOVAs to examine whether (or not) participants rated a particular item as differentially representative of any of the four dimensions. Significant results were subjected to planned *t*-tests that examined whether a particular item was seen to be more representative of the theoretical dimension that it was designed for than of any alternative dimension (Hinkin & Schriesheim, 2008; Hinkin & Tracey, 1999). In this way, this procedure complements the theoretically guided item-creation phase with additional empirical scrutiny that assesses item dimensionality.

After this, we selected 16 items with the clearest item dimensionality to conduct an "extended data matrix" factor analysis (Schriesheim et al., 1993). For this analysis, the data were transformed into a matrix that represented the 16 ILI items in 16 columns while each participant's evaluations of the items in terms of the four leadership dimensions were represented in four separate rows (i.e., to evaluate all items in terms of prototypicality, advancement, entrepreneurship, impresarioship). As the sample included 238 participants, we thus ended up with a total of 952 rows (four rows per participant). The data were then analyzed by means of principal-axis factor analysis that examined unrotated and rotated factor solutions to test whether (or not), based on participants' judgments of the items' representativeness of each dimension, the items can be assigned to those underlying leadership dimensions that they were theoretically expected to load on (see Schriesheim et al., 1993).

Results

Means, standard deviations, and results from one-way ANOVAs and planned *t*-tests are presented in Table 1. Analyses revealed that all items differed in the extent to which they captured the particular leadership dimensions (all $F > 11$, $p < .001$). More

Table 1
Study 1: Results of ILI content validity ratings (showing mean ratings, ANOVAs, and planned directional *t*-test comparisons).

ILI item and scale	B *mean* (*SD*)	D *mean* (*SD*)	C *mean* (*SD*)	M *mean* (*SD*)	One-way *F*-test (*p*-value)	Planned directional *t*-test comparisons		
ILI 1 (B)	5.96 (1.29)	4.90 (1.69)	5.09 (1.54)	5.00 (1.69)	29.85 (.001)	B > D*	B > C*	B > M*
ILI 2 (D)	4.80 (1.58)	6.01 (1.29)	4.91 (1.63)	5.46 (1.52)	43.93 (.001)	D > B*	D > C*	D > M*
ILI 3 (C)	5.31 (1.58)	4.14 (1.79)	6.42 (0.77)	4.54 (1.80)	130.87 (.001)	C > B*	C > D*	C > M*
ILI 4 (M)	4.87 (1.68)	4.92 (1.64)	5.71 (1.50)	5.69 (1.45)	25.27 (.001)	M > B*	M > D*	M > C
ILI 5 (B)	6.13 (1.25)	4.71 (1.69)	5.11 (1.49)	4.63 (1.73)	63.08 (.001)	B > D*	B > C*	B > M*
ILI 6 (D)	4.95 (1.58)	5.85 (1.37)	4.66 (1.64)	5.09 (1.66)	30.51 (.001)	D > B*	D > C*	D > M*
ILI 7 (C)	5.31 (1.58)	4.14 (1.79)	6.42 (0.77)	4.54 (1.80)	130.87 (.001)	C > B*	C > D*	C > M*
ILI 8 (M)	4.50 (1.58)	5.29 (1.51)	4.86 (1.57)	5.84 (1.36)	47.33 (.001)	M > B*	M > D*	M > C*
ILI 9 (B)	6.23 (1.16)	4.74 (1.65)	5.02 (1.54)	4.45 (1.78)	90.09 (.001)	B > D*	B > C*	B > M*
ILI 10 (D)	5.25 (1.59)	6.33 (1.04)	4.92 (1.67)	5.19 (1.82)	56.81 (.001)	D > B*	D > C*	B > M*
ILI 11 (C)	5.45 (1.55)	4.50 (1.70)	6.04 (1.25)	4.81 (1.70)	63.14 (.001)	C > B*	C > D*	C > M*
ILI 12 (M)	4.61 (1.59)	5.28 (1.59)	4.98 (1.70)	6.01 (1.25)	46.95 (.001)	M > B*	M > D*	M > C*
ILI 13 (B)	6.27 (1.22)	4.58 (1.71)	5.19 (1.70)	4.48 (1.68)	96.45 (.001)	B > D*	B > C*	B > M*
ILI 14 (D)	5.34 (1.47)	6.31 (1.13)	5.07 (1.63)	5.30 (1.61)	44.28 (.001)	D > B*	D > C*	D > M*
ILI 15 (C)	4.94 (1.65)	4.71 (1.68)	5.68 (1.42)	4.77 (1.73)	27.76 (.001)	C > B*	C > D*	C > M*
ILI 16 (M)	5.08 (1.63)	5.94 (1.43)	5.29 (1.61)	6.03 (1.24)	35.17 (.001)	M > B*	M > D	M > C*
ILI 17 (D)	5.00 (1.60)	6.03 (1.26)	4.94 (1.68)	5.43 (1.67)	34.45 (.001)	D > B*	D > C*	D > M*
ILI 18 (C)	5.91 (1.40)	4.67 (1.63)	5.77 (1.30)	4.77 (1.66)	61.73 (.001)	C > B	C > D*	C > M*
ILI 19 (M)	4.89 (1.56)	5.35 (1.57)	5.25 (1.62)	6.29 (1.17)	57.66 (.001)	M > B*	M > D*	M > C*
ILI 20 (D)	5.01 (1.62)	5.64 (1.52)	5.41 (1.56)	5.60 (1.53)	11.48 (.001)	D > B*	D > C*	D > M

Note. * $p < .05$. Ratings for all variables were indicated on Likert scales ranging from 1 (*not at all*) to 7 (*completely*). Abbreviations for the four dimensions are: Identity Prototypicality (B = 'Being one of us'); Identity Advancement (D = 'Doing it for us'); Identity Entrepreneurship (C = 'Crafting a sense of us'); Identity Impresarioship (M = 'Making us matter'). Items in bold match the theoretically intended dimension more clearly than all three other dimensions, whereas all remaining items match the theoretically intended dimension more clearly than two other dimensions.

specifically, 16 of the 20 items matched the intended leadership dimension most strongly (i.e., more than any alternative dimension). The four remaining items also showed good correspondence with the intended dimensions. That is, planned *t*-test comparisons indicated that these four items mapped more clearly onto the theoretically intended dimension than two comparison dimensions but did not map more closely on the theoretically expected dimensions than one other dimension.

In line with empirical evaluations, we then selected four items per dimension with the clearest item dimensionality (items with best item dimensionality are indicated in bold) and subjected these to an extended data matrix factor analysis (Schriesheim et al., 1993). First, this involved an examination of an unrotated principal-axis factor analysis of the 16 items to calculate the appropriate number of underlying dimensions. The eigenvalues (and explained variance) of the first eight factors were 5.78 (36.14%), 2.43 (15.12%), 1.77 (11.04%), .95 (5.95%), .70 (4.37%), .58 (3.62%), .55 (3.46%), and .45 (2.82%). Supporting the extraction of four dimensions, although the fourth factor had an eigenvalue of just less than one (i.e., .95), it explained more than 5% of the variance (i.e., 5.95%). Together, the first four factors explained 68.3% of the total variance.

To interpret the factor structure and item loadings, we then subjected these 16 items to a principal-axis factor analysis in which the four factors were orthogonally (varimax) rotated (as the four leadership dimensions are theoretically independent; see also Neider & Schriesheim, 2011; Schriesheim et al., 1993). Results are presented in Table 2. Findings indicate a clear factor structure such that the items that were theoretically expected to measure a particular dimension clearly loaded on the expected dimension (item communalities range between .34 and .75). All the item loadings on the theoretically consistent dimensions are above .46. Moreover, all item cross-loadings (on dimensions other than the principal dimension) are less than .40. In line with recommendations to use an item loading criterion of .40 (Ford, MacCallum, & Tait, 1986), the findings support the distinctiveness of the four leadership dimensions.

These findings provide evidence that on the whole participants were clearly able to assign items to the intended dimensions of identity leadership. Indeed, the factor structure and item loadings indicate a consistent pattern such that (a) items were assigned to dimensions with which they were theoretically consistent, (b) the four factors explained a significant amount (68%) of the variance, and (c) items loaded highly on the primary factor (all above .40) while showing negligible cross-loadings (all less than .40).

Discussion

Study 1 tested the content validity of ILI items by assessing item dimensionality and factor structure. Results provide consistent support for the items' content validity in so far as the 16 selected items were understood to map clearly onto the four dimensions of identity leadership in anticipated ways. Furthermore, extended data matrix principal-axis factor analysis indicated that the four extracted factors comprised those four items that were expected to comprise a particular dimension (explaining more than two-thirds of the variance in ratings of construct representativeness). Item loadings also indicated that the four dimensions are distinct with high item loadings on the anticipated factor and low cross-loadings.

In sum, following the logic and recommendations presented by Gehlbach and Brinkworth (2011), as well as Schriesheim et al. (1993) and Neider & Schriesheim (2011), findings from this initial study provide empirical evidence for the ILI items' content validity and thereby a solid basis for further tests of the inventory's construct and criterion validity.

Table 2
Study 1: Results of ILI's content validity (showing rotated factors).

ILI item and scale	Factor 1 (B)	Factor 2 (D)	Factor 3 (M)	Factor 4 (C)	Item communality (h^2)
ILI 1 (B)	**.64**	.20	.05	.23	.51
ILI 2 (D)	.05	**.64**	.29	.05	.50
ILI 3 (C)	.22	.01	.01	**.80**	.68
ILI 4 (M)	.10	.09	**.58**	.35	.48
ILI 5 (B)	**.69**	.21	.06	.25	.59
ILI 6 (D)	.24	**.67**	.17	.09	.54
ILI 7 (C)	.21	.09	.19	**.77**	.68
ILI 8 (M)	.06	.29	**.73**	.07	.62
ILI 9 (B)	**.83**	.17	.06	.19	.75
ILI 10 (D)	.24	**.76**	.18	.03	.67
ILI 11 (C)	.36	.06	.23	**.63**	.58
ILI 12 (M)	.02	.21	**.81**	.07	.70
ILI 13 (B)	**.76**	.17	.08	.27	.68
ILI 14 (D)	.20	**.71**	.20	.07	.59
ILI 15 (C)	.31	.12	.18	**.45**	.34
ILI 16 (M)	.09	.23	**.62**	.12	.46
Eigenvalue (% of variance explained)	5.78 (36.1%)	2.43 (15.1%)	1.77 (11%)	.95 (5.9%)	10.93 (68.3%)

Note. Abbreviations for the four dimensions are: Identity Prototypicality (B = 'Being one of us'); Identity Advancement (D = 'Doing it for us'); Identity Entrepreneurship (C = 'Crafting a sense of us'); Identity Impresarioship (M = 'Making us matter'). Loadings >.40 are in bold.

Study 2: Establishing construct, discriminant, and criterion validity

In our second study we sought to probe the ILI's validity further (Kaplan & Saccuzzo, 2009). The study had three key goals. The first of these was to establish construct validity by showing that the ILI has good factor structure, such that the four dimensions it identifies are meaningful and best treated as distinct. The second goal was to establish discriminant validity by showing that the ILI can be differentiated from authentic leadership — a theoretical tradition that places emphasis on leaders' understanding of their self and that has grown exponentially during the last few years (for a comprehensive review, see Gardner, Cogliser, Davis, & Dickens, 2011). With this in mind, we examined whether the ILI assesses a construct that is discriminant from that assessed by the ALQ — the current standard and most widely used measure of authentic leadership (Walumbwa et al., 2008). Beyond this, we aimed to establish whether the ILI can be differentiated from self-esteem (Robins, Hendin, & Trzesniewski, 2001), a core construct in psychology to which, theoretically, identity leadership should be unrelated (to examine whether the ILI is robust against general response bias). The third goal was to establish criterion validity by showing that the ILI nevertheless predicts relevant leadership outcomes (job satisfaction and social identification with the team).

Consistent with prior research that has found followers' job satisfaction to be associated with identity prototypicality (Pierro, Cicero, Bonaiuto, van Knippenberg, & Kruglanski, 2005), we expected our new and refined measurement of identity prototypicality to be related to job satisfaction. In addition, because followers respond more positively to their group's leader to the extent that they perceive her or him to be promoting shared group interests (Platow et al., 1997), we also expected followers to respond more positively to their own role and function within that group (in terms of job satisfaction) to the extent that their leader was seen to engage in identity advancement. At the same time, we expected that leaders' crafting of an identity would be most closely related to followers' social identification. This is because followers should come to internalize a group membership to the extent that there is a shared appreciation of the group in the first place — and this in turn should be enhanced by leaders' efforts to bring group members together and to define the meaning and content of its identity (Reicher et al., 2005; Reicher & Hopkins, 2001; Smith, Amiot, Smith, Callan, & Terry, 2013). We would also note that although we had expectations about those dimensions that would play a pronounced role in particular outcomes (here and in further studies), we did not rule out the possibility that outcomes could also be related to dimensions other than those hypothesized. Yet, to keep the discussion of the results concerning the criterion validity as simple and short as possible (not least because our primary focus is on construct and discriminant validity; Schriesheim & Cogliser, 2009), we focus on discussing only those dimensions for which there was a strong theoretical basis.

Method

Participants

Six-hundred-and-ninety-nine participants with work experience were recruited online from the US general population to participate in this study for a small reimbursement (recruited via MTurk; Buhrmester et al., 2011; Goodman et al., 2013). Fifty-four participants who failed to answer the two control questions as instructed (e.g., "This is a control question — please tick 3") were excluded, reducing the total sample size to 645 (316 female, three missing data points). Participants ranged in age from 18 to 71 years ($M = 32.51$; $SD = 11.02$), they had between one and 50 years of work experience ($M = 12.90$; $SD = 10.05$), and they had worked for up to 20 years with their current team leader ($M = 3.22$; $SD = 2.95$) in teams that ranged in size from two to 300 members ($M = 11.84$; SD = 20.67).

Design and procedure

Participants were asked to respond to questions relating to their workgroup or team as well as their job more generally. They responded to the 16 ILI items on 7-point Likert scales ranging from 1 (*not at all*) to 7 (*completely*). They also completed the 16 items of the *Authentic Leadership Questionnaire* (Walumbwa et al., 2008). These items assess sub-scales of (a) relational transparency (five items; $\alpha = .87$), (b) internalized moral/ethical perspective (four items; $\alpha = .89$), (c) balanced processing (three items; $\alpha = .92$), and (d) self-awareness (four items; $\alpha = .93$). Sample items include "My leader says exactly what he or she means" (transparency), "My leader makes difficult decisions based on high standards of ethical conduct" (internalized moral/ethical perspective), and "My leader knows when it is time to reevaluate his or her positions on important issues" (self-awareness). Item responses were made on a 5-point scale ranging from 0 (*not at all*), 1 (*once in a while*), 2 (*sometimes*), 3 (*fairly often*), to 4 (*frequently, if not always*).

After this, participants responded on 7-point Likert scales ranging from 1 (*not at all*) to 7 (*completely*) to (a) the *Single-Item Self-Esteem Scale* (Robins et al., 2001, "I have high self-esteem"), (b) four items assessing *workgroup identification* ($\alpha = .92$; based on Postmes, Haslam, & Jans, 2013; e.g., "I identify with this group"; "Being a member of this group is an important part of how I see myself"), and (c) four items assessing *job satisfaction* ($\alpha = .87$; based on the *Job Satisfaction Survey*; Spector, 1985; e.g., "I like doing the things I do at work"; "My job is enjoyable").

Results

Confirmatory factor analyses with ILI items

We conducted confirmatory factor analyses (CFAs) to assess the ILI's construct validity (as indicated by its internal item loadings and factor structure). An overview of the internal consistencies of the ILI's four dimensions and those for alternative

leadership measures is presented in Table 3 (along with the results for Studies 3 and 4). At the same time, discriminant validity was assessed by examining the fit of a variety of competing models (differentiating identity from authentic leadership).

First, we subjected the ILI items to a CFA specifying (A) a 16-item one-factor model (which would suggest only one undifferentiated underlying identity leadership dimension), (B) a 16-item four-factor model with a second-order factor (which would suggest four distinct leadership dimensions loading on one superordinate 'identity' factor), and (C) a 16-item four-factor model (which would suggest four distinct identity leadership dimensions). Because inspection of the covariances and error terms of the ILI items indicated a high loading of item 16 ("This leader makes the group matter for its members") on identity entrepreneurship, we also tested the three analogous models omitting this item. We thus also specified (D) a 15-item one-factor model (which again would suggest only one undifferentiated underlying identity leadership dimension), (E) a 15-item four-factor model with a superordinate second-order factor (which would suggest four distinct leadership dimensions loading on one superordinate 'identity' factor), and (F) a 15-item four-factor model (which would suggest four distinct identity leadership dimensions).

Results are presented in Table 4. Because a model's fit cannot be determined by a single fit index but should be interpreted by inspecting a constellation of multiple fit indices (Cheung & Rensvold, 2002), we analyzed the following fit indices: standardized root mean square residuals (SRMR), root mean square error of approximation (RMSEA), comparative fit (CFI), and non-normed fit (NNFI). Moreover, we also employed chi-square difference tests to compare competing models by examining differences in chi-square per degree of freedom. We should also note that although allowing error terms to correlate enhances the fit indices for a particular model, this practice does not change the factor structure and thus in this and all subsequent studies we refrain from this practice in the interest of presenting clear and interpretable results.

Overall, the fit indices yielded good fit to the data of Models E and F. Here, we should note that while some fit indices showed good fit, other indices showed marginal fit (i.e., chi-square and RMSEA). Because of the particular strengths and limitations of each fit index and in line with previous recommendations (Chen, Curran, Bollen, Kirby, & Paxton, 2008; Marsh, Hau, & Wen, 2004), we do not interpret global model fit with regard to a universal fixed cut-off value of a particular index but rather use such values as general rules of thumbs and interpret global model fit on the basis of the constellation of values associated with multiple indices (as well as by contrasting fit of alternative models). Altogether, overall model fit of model F was satisfactory and the chi-square difference test showed that Model F had a significantly better fit than Model E ($\Delta\chi^2/\Delta df = 12.84/2$, $p < .001$). Moreover, testing Models E and F against the competing models indicated a significantly better fit to the data of these models than any other model (all $\Delta\chi^2/\Delta df$, $p < .001$). In light of this empirical evidence, we therefore omitted item 16 from all further analyses.

Table 5 displays item loadings on the relevant factors for all items of Model F as well as intercorrelations between the factors. All items load highly on the specified factors, with correlations ranging from .84 to .96. At the same time, the intercorrelations between the four factors are relatively high (ranging from .78 to .88) and suggest that participants treated the different dimensions of their leaders as having significant overlap. Nevertheless, and aside from the fact that many multidimensional leadership inventories, such as the recently developed ALI, in which sub-dimensions generally show intercorrelations above .80 (Neider & Schriesheim, 2011), the CFA results provide stronger support for a four-factor model that discriminates between the four dimensions than for an undifferentiated one-factor model. In this way, these findings confirm the ILI's content validity and suggest that it is appropriate to treat the four leadership dimensions as distinct rather than as one undifferentiated conglomerate (see also Neider & Schriesheim, 2011).

Confirmatory factor analyses with ILI and ALQ items

As a next step, we conducted further CFAs with these 15 ILI items and the 16 ALQ items to test whether (or not) the four ILI dimensions capture a construct that is distinct from those constructs measured by the four ALQ dimensions. We specified competing models that included (G) a 31-item one-factor model (which would suggest poor discriminant validity because all

Table 3
Internal consistency reliabilities of ILI dimensions and additional leadership constructs measured in Studies 2, 3, and 4.

	No. of items	Coefficient alphas		
Variable		Study 2	Study 3	Study 4
Identity Leadership Inventory				
Identity Prototypicality ('Being one of us')	4	.96	.96	.91
Identity Advancement ('Doing it for us')	4	.95	.94	.89
Identity Entrepreneurship ('Crafting a sense of us')	4	.95	.96	.88
Identity Impresarioship ('Making us matter')	3	.94	.94	.92
Authentic Leadership Questionnaire				
Self-awareness	4	.93		
Relational transparency	5	.87		
Internalized moral perspective	4	.89		
Balanced processing	3	.92		
Idealized influence	4		.95	
Perceived quality of leader	5			.83

Table 4
Study 2: CFA results for item sets containing (a) ILI items and (b) ILI and ALQ items.

a) ILI items

	A: 16-item one-factor model	B: 16-item four-factor model with second-order factor	C: 16-item four-factor model	D: 15-item one-factor model	E: 15-item four-factor model with second-order factor	F: 15-item four-factor model*
Degrees of freedom	104	100	98	90	86	84
Chi-square	1836.37	862.59	838.11	1686.53	443.38	430.54
Std. RMR	.040	.040	.037	.041	.033	.033
RMSEA	.16	.11	.11	.11	.08	.08
RMSEA CIs	[.154, .167]	[.10, .12]	[.10, .12]	[.16, .17]	[.07, .09]	[.07, .09]
CFI	.88	.95	.95	.88	.97	.97
NNFI	.87	.94	.94	.87	.97	.97

b) ILI and ALQ items

	G: 31-item one-factor model	H: 31-item two-correlated-factor model (one factor each for ILI and ALQ)	I: 31-item five-factor model (one factor for ILI and four factors for ALQ)	J: 31-item five-factor model (four factors for ILI and one factor for ALQ)	K: 31-item eight-correlated-factor model*
Degrees of freedom	434	433	424	424	406
Chi-square	4044.87	3079.93	2829.08	1815.83	1531.83
Std. RMR	.046	.035	.034	.035	.034
RMSEA	.11	.10	.09	.07	.07
RMSEA CIs	[.11, .12]	[.09, .10]	[.09, .09]	[.07, .08]	[.06, .07]
CFI	.85	.89	.90	.94	.95
NNFI	.83	.87	.88	.93	.94

Note. * best-fitting model; none of the models specified correlated error terms.

items would only measure one superordinate 'leadership' factor), (H) a 31-item two-correlated factor model with the 15 ILI items loading on one 'identity leadership factor' and the 16 ALQ items loading on one 'authentic leadership factor' (which would suggest poor content validity of both measures as only their superordinate factors would be supported), (I) a five-factor model with the 15 ILI items loading on one 'identity leadership factor' and the 16 ALQ items loading on the differentiated four dimensions of authentic leadership (which would suggest discriminant validity of the ILI from the ALQ but no internal differentiation of the four ILI dimensions), (J) a five-factor model with the 16 ALQ items loading on one 'authentic leadership factor' and the 15 ILI items loading on the four differentiated identity leadership dimensions (which would suggest discriminant validity of the ILI from the

Table 5
Study 2: Standardized CFA results displaying (a) item loadings and (b) factor intercorrelations.

a) Item loadings

Item	Factor 1	Factor 2	Factor 3	Factor 4
1 (B)	.96			
2 (B)	.95			
3 (B)	.89			
4 (B)	.92			
5 (D)		.94		
6 (D)		.91		
7 (D)		.89		
8 (D)		.92		
9 (C)			.84	
10 (C)			.93	
11 (C)			.94	
12 (C)			.89	
13 (M)				.88
14 (M)				.93
15 (M)				.93

b) Factor intercorrelations

Factor	1	2	3	4
1	1.00			
2	.88	1.00		
3	.87	.88	1.00	
4	.79	.78	.82	1.00

Note. Abbreviations for the four dimensions are: Identity Prototypicality (B = 'Being one of us'); Identity Advancement (D = 'Doing it for us'); Identity Entrepreneurship (C = 'Crafting a sense of us'); Identity Impresarioship (M = 'Making us matter'). Loadings >.40 are in bold.

ALQ but no internal differentiation of the ALQ's four dimensions), and (K) an eight-correlated-factor model that includes the four ILI dimensions as well as the four ALQ dimensions (which would suggest discriminant validity of the ILI from the ALQ while differentiating each scale's four dimensions). Results of the competing models are presented in Table 4. The fit indices indicate good fit of the data to Models J and K. However, overall, Model K, which specified 4 sub-dimensions in each of the two inventories, fitted the data best. Moreover, a chi-square difference test indicated that this model had significantly better fit to the data than any competing model (all $\Delta\chi^2/\Delta df$, $p < .001$).

Bivariate correlations between ILI dimensions and dependent variables

To explore issues of discriminant validity further, next we examined the relationship between the four ILI dimensions and self-esteem. Intercorrelations between the four identity leadership dimensions, self-esteem, and the dependent variables are presented in Table 6. In line with expectations, these correlations indicated that the relationship between each identity leadership dimension and self-esteem was only weak (between $r = .11$ for prototypicality and $r = .15$ for impresarioship).

Regression analyses examining criterion validity

In a final stage of analysis, we examined the relationship between the four ILI dimensions and the dependent variables. The correlations presented in Table 6 indicate that all four dimensions were positively correlated with job satisfaction and team identification. We then conducted linear regressions predicting each of the criteria, where discriminant validity as well as the usefulness of individual dimensions should be indicated by different patterns in 'predicting' each dependent variable (while controlling for each other; in line with procedures followed by Neider & Schriesheim, 2011). Moreover, we refrain from contrasting the ILI with other measures (here ALQ) in predicting outcomes (consistent with Neider & Schriesheim, 2011) because our focus is on construct and discriminant (rather than incremental criterion) validity (Kaplan & Saccuzzo, 2009). Regression results are presented in the bottom half of Table 6. Supporting our hypotheses, team members showed greater job satisfaction as a function of increased leaders' identity prototypicality ($\beta = .24$, $p < .001$) and identity advancement ($\beta = .24$, $p < .001$). However, job satisfaction was not predicted by identity entrepreneurship or identity impresarioship. Moreover, in support of our hypothesis, team members identified more strongly with the team to the extent that they perceived their leader to have engaged in the process of crafting a sense of shared identity ($\beta = .31$, $p < .001$). At the same time, team identification was unrelated to identity advancement but positively related to identity prototypicality ($\beta = .19$, $p = .02$) and identity impresarioship ($\beta = .15$, $p = .02$). These relationships between ILI dimensions and criteria were unaffected when controlling for self-esteem, thereby providing support for the scale's concurrent validity.

Table 6
Study 2: Results displaying (a) means, standard deviations, and intercorrelations between ILI dimensions and outcome variables and (b) multiple linear regression coefficients for ILI dimensions predicting dependent variables.

a) Means, standard deviations and intercorrelations between ILI dimensions and outcome variables

Variable	Mean	*SD*	1	2	3	4	5	6	7
1. Identity Prototypicality	4.87	1.82	–						
2. Identity Advancement	4.76	1.82	.88	–					
3. Identity Entrepreneurship	4.73	1.68	.87	.88	–				
4. Identity Impresarioship	4.37	1.81	.79	.78	.82	–			
5. Self-esteem	4.60	1.60	.11	.14	.13	.15	–		
6. Job satisfaction	4.80	1.53	.58	.58	.57	.52	.28	–	
7. Team identification	4.93	1.49	.50	.47	.52	.48	.19	.66	–

b) Multiple linear regression coefficients for ILI dimensions predicting dependent variables

ILI Dimension	*B*	*S.E.*	Beta	*t*-value
Job satisfaction ($R^2 = .37$; $F[4,640] = 92.26$, $p < .001$)				
Identity Prototypicality	.205	.063	.244	3.25**
Identity Advancement	.204	.063	.243	3.25**
Identity Entrepreneurship	.079	.071	.087	1.11
Identity Impresarioship	.055	.049	.064	1.12
Team identification ($R^2 = .29$; $F[4,640] = 63.90$, $p < .001$)				
Identity Prototypicality	.152	.065	.186	2.34*
Identity Advancement	−.066	.065	−.080	−1.01
Identity Entrepreneurship	.271	.073	.305	3.70**
Identity Impresarioship	.123	.050	.149	2.45*

Note. All intercorrelations are statistically significant at $p < .01$; for linear regression results: *$p < .05$. **$p < .01$; Ratings for all variables were indicated on Likert scales ranging from 1 (*not at all*) to 7 (*completely*).

Discussion

Study 2 examined the ILI's construct, discriminant, and criterion validity. Overall, CFA results indicated that the model with 15 items and four distinct factors had good fit to the data and significantly better fit than competing models. These patterns provide evidence of the ILI's construct validity and are consistent with findings from Study 1. Moreover, the inventory's discriminant validity was supported by CFA findings indicating (a) significantly better fit for an eight-factor model specifying all ILI and ALQ dimensions than any competing model with fewer factors and (b) a weak and negligible relationship of the four identity dimensions with self-esteem (which also did not affect relationships with outcomes). Finally, supporting hypotheses and providing evidence for criterion validity, the four identity leadership dimensions also differentially predicted relevant outcomes job satisfaction and team identification.

Given that the present participants were recruited online and largely from a single (Western) country, there was clearly value in seeking to confirm the instrument's construct and criterion validity within a different population. With this goal in mind, Study 3 was conducted with research participants from mainland China.

Study 3: Confirming construct, discriminant, and criterion validity

As in Study 2, we sought first to test further the ILI's construct validity by examining whether the ILI is best treated uniformly in terms of a single-construct or in terms of its four distinct identity leadership dimensions. Second, we aimed to provide a more expansive test of the scale's discriminant validity by testing whether the ILI is also distinguishable from leaders' *charisma* (as indicated in their idealized influence; Bass & Riggio, 2006), a construct which has inspired and continues to inform a great deal of contemporary leadership research in psychology, management, and the human sciences more broadly (DeRue, Nahrgang, Wellman, & Humphrey, 2011; Rees, 2012). Consistent with Study 2, to explore issues of discriminant validity further we also sought to investigate whether or not the scale correlates with self-esteem (Robins et al., 2001), a construct to which it should be theoretically unrelated.

Third, elaborating upon the ILI's criterion validity, we aimed to examine its relationship to perceived *team support* (see Eisenberger, Huntington, Hutchison, & Sowa, 1986; Jetten, Haslam, & Haslam, 2012). Here we anticipated that group members would feel more supported by their team to the extent that they perceived their leaders to engage in a process of identity entrepreneurship (i.e., creating a shared sense of 'us'; Reicher et al., 2005). This was for at least two reasons. On the one hand, we know that people are more likely to *provide* social support to others who they categorize as 'ingroup' rather than 'outgroup' members (Levine, Prosser, Evans, & Reicher, 2005). Following from this, leaders' efforts to create a sense of shared ingroup identity among followers should in turn encourage followers to provide more support within the group (Haslam, Reicher, & Levine, 2012). On the other hand, people also *receive* more support and feel more supported to the extent that any support is perceived to originate from an ingroup rather than an outgroup source (Platow et al., 2007; van Dick & Haslam, 2012). Again, though, this sense of shared identity typically has to be cultivated in the first place through acts of identity entrepreneurship.

As well as this, the present study aimed to examine followers' *work engagement* as a key indicator of their motivation and well-being in the workplace (Bakker, Schaufeli, Leiter, & Taris, 2008; Ellemers et al., 2004; Schaufeli, Bakker, & Salanova, 2006). Here previous evidence suggests that employees show greater work engagement to the extent that the team as a whole (that arguably includes team members as well as leaders) engages in job crafting by actively shaping the work environment (Tims, Bakker, Derks, & van Rhenen, 2013). By the same token, we anticipated that to the extent that leaders craft followers' work environment by embedding structures related to shared group membership then those followers would in turn be more engaged at work (Haslam et al., 2011). In sum, the present study was designed to extend Study 2 by broadening (a) the sample, (b) construct comparisons, and (c) relevant outcomes.

Method

Participants

We recruited 338 employees who worked for a large organization in the Chinese solar industry to participate in this study. Participants' age ranged from 19 to 63 years ($M = 33.90$; $SD = 7.65$) and 72% were male (23 missing data points). On average, employees had 11 years of work experience ($SD = 7.11$) and had worked for three years with their current team leader ($SD = 1.46$). Team size ranged from two to 450 members ($M = 26.91$; $SD = 55.39$).

Design and procedure

Participants were invited to participate in the current study by responding to a series of questions relating to their team leaders. All items and scales were translated by experts to Mandarin and then back translated into English (Brislin, 1970). As in Study 2, participants responded on 7-point Likert scales ranging from 1 (*not at all*) to 7 (*completely*) to the 15 ILI items[4]. Moreover,

[4] Participants in Study 3 as well as in Study 4 also responded to the item that was shown to have relatively poor properties in Study 2. Again, consistent with Study 2, inspection of the modification indices indicated that this item had a large error term and covariance with identity entrepreneurship in both studies. In the interests of parsimony, we thus focus on describing in detail only those results that relate to models that omit this item (as one would expect, all models that include this item showed poorer fit to the data).

they also responded to four items assessing *leaders' idealized influence* ($\alpha = .95$; based on Platow et al., 2006, and the MLQ; e.g., "This leader increases others' optimism for the future"; "This leader gives people a sense of overall purpose"). Participants then responded on the same 7-point scales to the single-item *self-esteem* measure that was used in Study 2 (Robins et al., 2001) as well as six items assessing *perceived team support* ($\alpha = .89$; based on Eisenberger et al., 1986; e.g., "This team really cares about my well-being"; "This team is willing to help me when I need a special favor"). Finally, participants completed the short nine-item version of the *Utrecht Work Engagement Scale* on scales ranging from 0 (*never*) to 6 (*always/everyday*; $\alpha = .91$; based on Schaufeli et al., 2006; e.g., "At my work, I feel strong and vigorous"; "I feel happy when I am working intensely").

Results

Confirmatory factor analyses with ILI items

We conducted a CFA testing different competing models identical to those described in Study 2. As can be seen from Table 7, Models B and C showed the best fit to the data. While Model C had good fit in terms of some indices, it had marginal fit in terms of other indices (i.e., chi-square and RMSEA). The conglomeration of all fit indices indicates that Model C had an overall satisfactory fit to the data. Moreover, fit for Model B and C was significantly better than the fit for competing Model A ($\Delta\chi^2/\Delta df$, $p < .001$). Nevertheless, Model C had a significantly better fit than Model B ($\Delta\chi^2/\Delta df = 10.22/2$, $p = .01$). The standardized item loadings on the respective factors for Model C are presented in Table 8, revealing that the items loaded highly on their specified factor, varying between .83 and .96. The intercorrelations between the four dimensions were also high and varied between .73 and .88 suggesting that these have significant overlap. On the whole, then, because these CFA results indicate a better fit for the differentiated four-factor model than for the one-factor model and are also highly consistent with findings of Study 2, it would appear that the four dimensions are better conceptualized as separate constructs than as a single generic construct.

Confirmatory factor analyses with ILI and idealized influence items

We examined whether identity leadership can be distinguished from leaders' idealized influence by testing competing models including (D) a 19-item one-factor model (collapsing all items assessing identity leadership and idealized influence into a single factor), (E) a 19-item two-factor model (collapsing the four identity dimensions into a single factor and differentiating it from idealized influence) and (F) a 19-item five-factor model (differentiating the four identity leadership dimensions from idealized influence). The results are presented in Table 7. These indicate that Models D and E have poor fit while Model F has a good fit to the data. Moreover, a chi-square difference test indicated that Model F fitted the data significantly better than either Model D or Model E (all $\Delta\chi^2/\Delta df$, $p < .001$). By indicating that the four dimensions can and should be differentiated from idealized influence, results thus underscore the ILI's discriminant validity.

Table 7
Study 3: CFA results for item sets containing (a) ILI items and (b) ILI and idealized influence items.

a) ILI Items			
	A: 15-item one-factor model	B: 15-item four-factor model with second-order factor	C: 15-item four-factor model*
Degrees of freedom	90	86	84
Chi-square	1069.73	407.19	396.97
Std. RMR	.051	.033	.031
RMSEA	.19	.11	.109
RMSEA CIs	[.18, .20]	[.10, .12]	[.10, .12]
CFI	.84	.95	.95
NNFI	.83	.93	.94
b) ILI and idealized influence Items			
	D: 19-item one-factor model	E: 19-item two-correlated-factor model (one factor each for ILI and idealized influence)	F: 19-item five-factor model (four factors for ILI and one factor for idealized influence)*
Degrees of freedom	152	151	142
Chi-square	1844.70	1248.57	556.07
Std. RMR	.070	.049	.032
RMSEA	.19	.16	.099
RMSEA CIs	[.19, .20]	[.15, .17]	[.09, .11]
CFI	.78	.86	.95
NNFI	.76	.84	.93

Note. * best-fitting model; none of the models specified correlated error terms.

Table 8
Study 3: Standardized CFA results displaying (a) item loadings and (b) factor intercorrelations.

a) Items loadings

Item	Factor 1	Factor 2	Factor 3	Factor 4
1 (B)	.91			
2 (B)	.94			
3 (B)	.96			
4 (B)	.89			
5 (D)		.88		
6 (D)		.93		
7 (D)		.90		
8 (D)		.83		
9 (C)			.89	
10 (C)			.95	
11 (C)			.95	
12 (C)			.90	
13 (M)				.86
14 (M)				.94
15 (M)				.94

b) Factor intercorrelations

Factor	1	2	3	4
1	1.00			
2	.86	1.00		
3	.88	.87	1.00	
4	.73	.79	.78	1.00

Note. Abbreviations for the four dimensions are: Identity Prototypicality (B = 'Being one of us'); Identity Advancement (D = 'Doing it for us'); Identity Entrepreneurship (C = 'Crafting a sense of us'); Identity Impresarioship (M = 'Making us matter'). Loadings >.40 are in bold.

Bivariate correlations between ILI dimensions and dependent variables

Intercorrelations between the four dimensions of identity leadership and dependent variables are presented in Table 9. Speaking to the ILI's discriminant validity, the four identity dimensions show weak or no relationships with the theoretically unrelated construct of self-esteem (with correlations ranging from $r = .10$ to $r = .20$ for advancement and entrepreneurship, respectively). Consistent with Study 2, this analysis therefore provides further evidence of the instrument's discriminant validity.

Table 9
Study 3: Results displaying (a) means, standard deviations, and intercorrelations between ILI dimensions and outcome variables and (b) multiple linear regression coefficients for ILI dimensions predicting dependent variables.

a) Means, standard deviations and intercorrelations between ILI dimensions and outcome variables

Variable	Mean	*SD*	1	2	3	4	5	6	7
1. Identity Prototypicality	5.32	1.45	–						
2. Identity Advancement	5.24	1.47	.86**	–					
3. Identity Entrepreneurship	5.20	1.49	.88**	.87**	–				
4. Identity Impresarioship	4.85	1.54	.73**	.79**	.78**	–			
5. Self-esteem	5.80	1.10	.16**	.10	.20**	.11	–		
6. Perceived team support	5.06	1.16	.58**	.57**	.65**	.55**	.31**	–	
7. Work engagement	4.37	1.10	.46**	.44**	.49**	.46**	.28**	.47**	–

b) Multiple linear regression coefficients for ILI dimensions predicting dependent variables

ILI Dimension	*B*	*S.E.*	Beta	*t*-value
Perceived team support ($R^2 = .43$; $F[4,290] = 42.72$, $p < .001$)				
Identity Prototypicality	−.036	.084	−.044	−.43
Identity Advancement	.036	.083	.044	.43
Identity Entrepreneurship	.420	.084	.528	4.99**
Identity Impresarioship	.119	.058	.157	2.04*
Work engagement ($R^2 = .26$; $F[4,290] = 24.63$, $p < .001$)				
Identity Prototypicality	.078	.091	.101	.86
Identity Advancement	−.082	.094	−.109	−.88
Identity Entrepreneurship	.205	.093	.272	2.20*
Identity Impresarioship	.194	.064	.273	3.05**

Note. *$p < .05$. **$p < .01$. Ratings for all variables were indicated on Likert scales ranging from 1 (*not at all*) to 7 (*completely*) other than for work engagement which were indicated on scales ranging from 0 (*never*) to 6 (*always/everyday*). Degrees of freedom are reduced due to missing data.

Regression analyses examining criterion validity

The results of linear regression analyses are presented in the bottom half of Table 9. Supporting our core hypotheses, when predicting perceived team support, this analysis pointed to the significant impact of leaders' perceived identity entrepreneurship ($\beta = .53$, $p = .001$), while there was no effect for their identity prototypicality or identity advancement (both $\beta < .05$, $p > .05$). At the same time, it also pointed to the significant impact of leaders' identity impresarioship ($\beta = .16$, $p = .04$; although this relationship was weaker than in the case of identity entrepreneurship).

When predicting respondents' work engagement, analysis also supported our hypotheses in pointing to the significant impact of leaders' identity impresarioship ($\beta = .27$, $p = .003$). Moreover, the effects of leaders' perceived identity prototypicality and identity advancement were both non-significant (both $\beta < .11$, $p > .05$), while the effect of identity entrepreneurship was significant ($\beta = .27$, $p = .003$). These results were largely unaffected when controlling for self-esteem (the only difference being that the impact of identity impresarioship on perceived team support became marginally significant). Overall, these findings thus provide further confirmation of the ILI's criterion validity.

Discussion

Beyond the findings of Study 2, Study 3's main findings provide further support for the ILI's construct validity (CFA results indicate that the four specified dimensions should be conceptualized as distinct factors rather than as a single undifferentiated factor), discriminant validity (the four dimensions are distinct from idealized influence and are weakly related or unrelated to the theoretically unrelated construct self-esteem), and criterion validity (the sub-dimensions are as expected differentially related to team support and work engagement). Together, Studies 2 and 3 thus provide solid evidence of the ILI's psychometric properties for samples of workers in manufacturing and service industries drawn from both North America and Asia.

Study 4: Establishing domain generalizability

As a final stage in our empirical analysis, in Study 4 we aimed to provide further evidence of the ILI's construct, discriminant, and criterion validity (Kaplan & Saccuzzo, 2009) by examining its properties in a very different leadership context — the domain of sport. To cover a broad range of sports we recruited players from basketball, soccer (football), volleyball, and handball teams and in each case respondents provided ratings of their team captain. Finally, complementing previous studies that had involved participants from North America and Asia, in this study we recruited participants from a European country (Belgium).

Assessing issues of discriminant validity, in this study we examined whether the four identity leadership dimensions can be distinguished from perceived quality of the captain in their role as leader (Fransen, Vanbeselaere, De Cuyper, Vande Broek, & Boen, 2014). Assessing the scale's criterion validity, consistent with research that has shown that ingroup leaders — and those who are particularly representative of that group — are particularly capable of influencing followers (Abrams, Randsley de Moura, Marques, & Hutchison, 2008; Subašić, Reynolds, Turner, Veenstra, & Haslam, 2011; van Knippenberg, Lossie, & Wilke, 1994), we expected team members to perceive athlete leaders to be more influential to the extent that they were seen to embody shared group membership (i.e., be identity prototypical). Moreover, we expected that team members would be more confident about the team's prospect of winning to the extent that they saw their athlete leaders to be engaging in identity advancement by standing up for, and actively promoting, shared group interests. At the same time, we expected that they would perceive greater cohesion around their shared task to the extent that they perceived their athlete leaders to engage in acts of identity impresarioship that serve to structure group activities around shared activities — thereby serving to embed the group in shared experience. Finally, consistent with Study 2, we expected team identification to be predicted primarily by leaders' identity entrepreneurship.

Method

Participants

We recruited 421 players from basketball (31%), soccer (football) (31%), volleyball (19%), and handball (19%) teams in Belgium. Participants' age ranged from 14 to 64 years ($M = 24.46$; $SD = 7.18$) and 44% were female. They had been playing for their current team for between one and 46 years ($M = 6.34$; $SD = 6.34$).

Design and procedure

Participants indicated their perceptions of their team and its corresponding team captain. All items and scales were translated by experts to Dutch (the language in which the study was administered) before being back translated into English (Brislin, 1970). Participants responded on 7-point Likert scales ranging from 1 (*not at all*) to 7 (*completely*) to ILI items as well as to items assessing *perceived quality of the captain in the role as leader* ($\alpha = .83$; five items after Fransen et al., 2014; "How well does the captain fulfill the role of team captain in general/task leader/motivational leader on the field/social leader off the field/external leader"). Moreover, they responded to items assessing (a) *team identification* ($\alpha = .91$; five items based on Doosje, Ellemers, &

Spears, 1995[5]; e.g., "I identify strongly with this team"; "I am very proud to be a member of this team"), (b) *task cohesion* ($\alpha =$ .86; five items based on Eys, Carron, Bray, & Brawley, 2007; e.g., "We all take responsibility for any loss or poor performance"; "Our team members communicate freely about each athlete's responsibilities during competition or practice"), (c) *team confidence* (two items; $r = .84$; "I believe that our team will succeed this season to achieve our goals"; "Our team believes that we will succeed this season in achieving our goals"), and (d) *perceived leader influence* (the single item "When the team captain clearly indicates during a game that he/she believes that our team will win, I also believe more strongly that our team will win"). Participants then provided demographic data and were debriefed.

Results

Confirmatory factor analyses with ILI items

We examined different competing models that were identical to those examined in previous studies. As presented in Table 10, CFA results indicate that Models B and C that distinguished between the four identity leadership dimensions (with or without a second-order factor, respectively) showed reasonably good fit to the data. Model C showed good fit to the data with regard to some indices, while it showed marginal-to-good fit with regard to others (i.e., chi-square, RMSEA, and CFI). On the whole, the constellation of values associated with all fit indices indicates that the overall fit of Model C was satisfactory. Moreover, a chi-square difference test indicated that Model C that did not specify a higher-order factor did not have better fit than Model B that specified such a higher-order factor ($\Delta\chi^2/\Delta df = 4.97/2$, $p = .08$). Moreover, both models had significantly better fit than any of the competing models (including a one-factor model with an undifferentiated superordinate 'identity' factor; all $\Delta\chi^2/\Delta df$, $p < .001$). Altogether, the findings thus support the scale's construct validity.

Table 11 displays the standardized item loadings on the respective factors on the basis of Model C. These indicate that the items load highly on their respective factors, with loadings ranging from .71 to .94. Moreover, the intercorrelations between the four factors are moderate to strong (between .57 and .78) suggesting that compared to the leaders in the previous samples, leaders in the current sample were seen to vary to a greater extent on the four dimensions. Together with the CFA results, and findings from Studies 2 and 3, these results provide evidence of the scale's construct validity — indicating that the four identity leadership dimensions should be treated as four differentiated constructs rather than as one undifferentiated dimension.

Confirmatory factor analyses with ILI and perceived leader quality items

Results of CFAs that explored whether identity leadership and perceived leader quality can and should be distinguished are shown in Table 10. Results indicate that Model F that differentiates the four identity leadership dimensions from perceived leader quality has an overall fit to the data that is satisfactory. Moreover, Model F has the best fit of all alternative models. In particular, it has better fit than both Model D (in which all ILI and perceived leader quality items load together) and Model H (in which two factors differentiate a superordinate 'identity' factor from perceived quality of the leader; all $\Delta\chi^2/\Delta df$, $p < .001$). Supporting the scale's discriminant validity, findings thus indicate that the four identity dimensions are different from perceived leader quality.

Regression analyses examining criterion validity

Table 12 displays intercorrelations between the ILI's four dimensions and dependent variables (as well as their means and standard deviations) and Table 13 regression analyses related to criterion validity. Consistent with findings from Study 2, results indicate that (a) perceived leader influence was predicted by identity prototypicality ($\beta = .24$, $p = .003$) and also by identity entrepreneurship ($\beta = .24$, $p = .002$) but not by the remaining dimensions, (b) team confidence was predicted by identity advancement ($\beta = .19$, $p = .02$) and also by identity impresarioship ($\beta = .16$, $p = .02$) but not by the other two dimensions, (c) team identification was significantly predicted by leader identity entrepreneurship ($\beta = .28$, $p = .001$) but not by the remaining dimensions, and (d) task cohesion was significantly predicted by identity impresarioship ($\beta = .17$, $p = .004$) and also by identity entrepreneurship ($\beta = .24$, $p = .003$) but not by the other two dimensions. Altogether, these results thus provide consistent support for the ILI's criterion validity.

Discussion

Augmenting the findings of the previous three studies, Study 4 provided additional tests of the ILI's validity in a different leadership context — namely, athlete leaders of sporting teams in Belgium. Together, the findings underline the inventory's construct validity (by indicating that the data fit best to a model that differentiates between the four identity leadership dimensions) and discriminant validity (by indicating that the four dimensions are distinct from perceived quality of the leader). Finally, the findings also support its criterion validity (by demonstrating the distinct relevance of different aspects of leaders' identity management to particular leadership outcomes). In this, the data encourage a differentiated appreciation (and

[5] We selected the present identification measure in Study 4 (and not the one we used in Study 2) because it was most likely to fit the current (sports) context and has been used successfully in previous studies in this setting. The present scale had a satisfactory internal consistency of above .90.

Table 10
Study 4: CFA results for item sets containing (a) ILI items and (b) ILI and perceived leader quality items.

a) ILI items			
	A: 15-item one-factor model	B: 15-item four-factor model with second-order factor*	C: 15-item four-factor model*
Degrees of freedom	90	86	84
Chi-square	1098.53	368.86	363.89
Std. RMR	.073	.049	.048
RMSEA	.17	.09	.09
RMSEA CIs	[.16, .18]	[.08, .10]	[.08, .10]
CFI	.80	.94	.94
NNFI	.78	.93	.93
b) ILI and perceived leader quality items			
	D: 20-item one-factor model	E: 20-item two-correlated-factor model (one factor each for ILI and perceived leader quality)	F: 20-item five-factor model (four factors for ILI and one factor for perceived leader quality)*
Degrees of freedom	170	160	160
Chi-square	1437.44	1337.87	641.98
Std. RMR	.069	.065	.051
RMSEA	.14	.14	.09
RMSEA CIs	[.14, .15]	[.13, .14]	[.08, .10]
CFI	.77	.80	.90
NNFI	.76	.78	.92

Note. * best-fitting models; none of the models specified correlated error terms.

assessment) of the different types of identity work that leaders perform (Haslam et al., 2011) — an appreciation that has been largely absent from the social identity research that has been conducted to date.

General discussion

The present paper presented findings from four studies (*Ns* = 1730) conducted with samples from the US, China, and Belgium that altogether provide consistent support for the ILI's content, construct, and criterion validity (Kaplan & Saccuzzo, 2009). Across the four studies, the instrument's content and construct validity is confirmed (a) by evidence of item and factor dimensionality indicating that the items reliably capture four distinct dimensions (in line with the theoretical definitions; Study 1; Schriesheim et

Table 11
Study 4: Standardized CFA results displaying (a) item loadings and (b) factor intercorrelations.

a) Item loadings				
Item	Factor 1	Factor 2	Factor 3	Factor 4
1 (B)	.77			
2 (B)	.81			
3 (B)	.92			
4 (B)	.88			
5 (D)		.78		
6 (D)		.87		
7 (D)		.88		
8 (D)		.77		
9 (C)			.84	
10 (C)			.94	
11 (C)			.84	
12 (C)			.71	
13 (M)				.90
14 (M)				.92
15 (M)				.86
b) Factor intercorrelations				
Factor	1	2	3	4
1	1.00			
2	.76	1.00		
3	.78	.75	1.00	
4	.64	.57	.67	1.00

Note. Abbreviations for the four dimensions are: Identity Prototypicality (B = 'Being one of us'); Identity Advancement (D = 'Doing it for us'); Identity Entrepreneurship (C = 'Crafting a sense of us'); Identity Impresarioship (M = 'Making us matter'). Loadings >.40 are in bold.

Table 12
Study 4: Results displaying means, standard deviations, and intercorrelations between ILI dimensions and outcome variables.

Variable	Mean	*SD*	1	2	3	4	5	6	7	8
1. Identity Prototypicality	5.01	1.17	–							
2. Identity Advancement	5.37	1.12	.76**	–						
3. Identity Entrepreneurship	4.94	1.15	.78**	.75**	–					
4. Identity Impresarioship	4.36	1.52	.64**	.57**	.67**	–				
5. Identification with team	1.90	1.00	.37**	.32**	.40**	.29**	–			
6. Task cohesion	6.44	1.34	.47**	.45**	.52**	.45**	.58**	–		
7. Team confidence	1.58	1.38	.35**	.36**	.33**	.33**	.39**	.48**	–	
8. Perceived leader influence	1.83	1.21	.48**	.44**	.48**	.33**	.40**	.38**	.29**	–

Note. $^{*}p < .05$. $^{**}p < .01$. Ratings for ILI items were indicated on Likert scales ranging from 1 (*not at all*) to 7 (*completely*); identification with team, team confidence, and perceived leader influence were indicated on scales ranging from −3 to +3; social cohesion was indicated on scales ranging from 1 to 9.

al., 1993) and (b) by evidence of the internal consistency of each dimension (as signaled by high internal reliabilities in Studies 2, 3, and 4). Similarly, confirmatory factor analyses reveal that the four-factor model has satisfactory-to-good fit to the data and significantly better fit than a grand single-factor model that does not differentiate between the four dimensions (Studies 2, 3, and 4).

Providing evidence of the scale's discriminant validity, we have also shown that identity leadership is distinguishable from (a) authentic leadership (Study 2; Gardner et al., 2011; Walumbwa et al., 2008), (b) leaders' idealized influence (Study 3; Bass & Riggio, 2006; Platow et al., 2006), and (c) perceived leader quality (Study 4; Fransen et al., 2014). Moreover, the four dimensions show weak or no relationships with the theoretically unrelated variable self-esteem (Studies 2 and 3), indicating that the scale's measurement is robust against general response bias.

Findings across Studies 2, 3, and 4 also speak to the criterion validity of the inventory by demonstrating that (a) leaders' identity prototypicality predicted team identification and job satisfaction (Study 2) as well as perceived leader influence (Study 4), (b) leaders' identity advancement predicted job satisfaction (Study 2) and team confidence (Study 4), (c) leaders' identity entrepreneurship predicted team members' team identification (Study 2 and 4), perceived team support, and work engagement (Study 3), as well as task cohesion and perceived leader influence (Study 4), while (d) leaders' identity impresarioship predicted team identification (Study 2), perceived team support, and work engagement (Study 3), as well as task cohesion and perceived team confidence (Study 4). In indicating that specific outcomes are predicted by different dimensions of identity leadership, these findings are consistent with theoretical predictions derived from recent theoretical analysis (e.g., as presented by Haslam et al., (2011)). At the same time, it is apparent that some outcomes were related to more than one dimension (e.g., social identification was related to identity entrepreneurship and identity impresarioship) and that there were nuanced variations in the relationships across samples and contexts (e.g., social identification was not related to identity impresarioship in Study 4 with athlete leaders in

Table 13
Study 4: Results displaying multiple linear regression coefficients for ILI dimensions predicting dependent variables.

ILI Dimension	*B*	*S.E.*	Beta	*t*-value
Perceived leader influence ($R^2 = .26$; $F[4,380] = 33.08$, $p < .001$)				
Identity Prototypicality	.248	.085	.237	2.97**
Identity Advancement	.118	.083	.108	1.45
Identity Entrepreneurship	.253	.275	.239	2.99**
Identity Impresarioship	−.035	.081	−.044	−.71
Team confidence ($R^2 = .16$; $F[4,389] = 17.63$, $p < .001$)				
Identity Prototypicality	.106	.100	.090	1.06
Identity Advancement	.229	.097	.186	2.38*
Identity Entrepreneurship	.021	.103	.017	.20
Identity Impresarioship	.143	.059	.157	2.41*
Identification with team ($R^2 = .17$; $F[4,389] = 19.34$, $p < .001$)				
Identity Prototypicality	.121	.072	.141	1.68
Identity Advancement	−.005	.069	−.006	−.07
Identity Entrepreneurship	.243	.074	.280	3.29**
Identity Impresarioship	.012	.042	.018	.29
Task cohesion ($R^2 = .30$; $F[4,385] = 40.58$, $p < .001$)				
Identity Prototypicality	.082	.089	.072	.93
Identity Advancement	.087	.086	.072	1.01
Identity Entrepreneurship	.346	.091	.297	3.79**
Identity Impresarioship	.149	.052	.169	2.85**

Note. $^{*}p < .05$. $^{**}p < .01$. Degrees of freedom vary due to missing data.

sports). The reasons for this variation were not the central focus of the present research but they point to important contextual sensitivities that future research should explore programmatically.

Theoretical and practical usefulness and implications

The present research advances our theoretical and practical understanding of identity leadership in at least three important ways. First, prior theorizing on this topic had focused primarily on leader prototypicality while placing less emphasis on other equally important aspects of the social identity approach to leadership. Moreover, some of the research on leader prototypicality had relied on measures that were problematic to the extent that they assessed prototypicality simply in terms of 'being average' or 'similar' to other group members. Although in some circumstances this may be important, research suggests that rather than capturing averageness or maximal similarity to other group members, prototypicality is more likely to capture the ideal-type of what it means to be 'one of us' (Hogg et al., 2012; Steffens et al., 2013; van Knippenberg, 2011). This issue was addressed in the current scale by ensuring that items avoided reference to any suggestion that being prototypical is simply a question of being average, and instead focused on prototypicality as a matter of being exemplary (see also Bartel & Wiesenfeld, 2013; Turner, 1985). This is not to say, however, that we should ignore (or re-conduct) the wealth of previous work that has been conducted on leaders' identity prototypicality (because its measurement might have been more precise or because it examines only one of the four dimensions that we have identified). On the contrary, this prior work has enabled us to gain valuable and informative insights into the leadership process. Nevertheless, going beyond this, we believe that the present studies suggest that there is much more to learn about leadership from future research which moves beyond any sense that identity leadership is simply about identity prototypicality (e.g., Halevy et al., 2011).

Second, the current inventory was developed to afford assessment of additional, more novel, aspects of leaders' identity work — specifically focusing on the degree to which leaders not only represent but also advance, craft, and embed a sense of shared social identity among followers (Haslam et al., 2011). By developing and validating scales that quantify group members' perceptions of leaders' achievements in these domains, the present research lays the foundations for new methodological and theoretical advancements. This is particularly important considering that previously researchers (a) have lacked refined measurements that might tap into leaders' embedding of identity-structure and their active advancement of shared ingroup interests (Haslam & Platow, 2001; Haslam et al., 2011; van Knippenberg & van Knippenberg, 2005), and (b) have tended to employ more or less exclusively qualitative methods in the assessment of leaders' identity entrepreneurship (Augoustinos & De Garis, 2012; Reicher & Hopkins, 2001, 2003; Reicher et al., 2005). This has meant that while qualitative analyses support claims that, beyond prototypicality, identity leadership involves additional elements of active mobilization and identity shaping (Elsbach & Kramer, 1996) these aspects had not entered mainstream leadership theory and research. On the basis of the present contribution it should be easier for researchers to map this landscape quantitatively in the process of uncovering when, why, and how these additional dimensions of identity leadership augment leaders' capacity to motivate followers to contribute to the achievement of group goals.

Third, the social identity approach to leadership originated out of a strong theoretical and experimental tradition (Haslam et al., 2011; Hogg et al., 2012; van Knippenberg, 2011) and to date the translation of this approach into practice — including the development, delivery, and testing of leadership training or interventions — has been rather piecemeal (for a review see Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009; but see Peters, Haslam, Ryan, & Steffens, 2014). A significant factor that has hampered efforts to use these insights for practical ends has been precisely our limited capacity to assess — and therefore provide 'hard' evidence for — the usefulness of the different dimensions of leaders' social identity management. This instrumentation void contrasts not only with the various scales that have been developed on the basis of other leadership theories and that have (to varying degrees) been provided with empirical validation but also with the various tools (e.g., Myers–Briggs type measurements) that have failed such tests. By allowing for the measurement of identity leadership not only as a representational issue (in terms of perceived identity prototypicality), but also as a rhetorical, practical, and structural issue (in terms of identity entrepreneurship, advancement, and impresarioship), the present inventory can be used to advance theory and practice that strives for a more comprehensive examination of the science and art of leaders' identity labor.

Limitations and future research

As we have seen, the full ILI scale (as set out in Appendix A) encompasses 15 items that distinguish between four different identity dimensions. Although future research may find these dimensions to be correlated with each other, we contend that this will not necessarily be the case. Instead the interrelationship between dimensions should be expected to vary (meaningfully) with context (e.g., interrelationships might be weaker in teams in which leaders' official roles are tied closely to particular tasks that map onto particular identity leadership dimensions). We therefore strongly recommend using the scale to examine separate dimensions of identity leadership rather than bundling these together in one global measure (consistent with CFA results from Studies 2 to 4). This practice will be more fruitful not only (a) from an empirical perspective (as the present findings suggest that even when the dimensions are correlated, the scale fits the data better when distinguishing between the dimensions rather than treating all dimensions in terms of a single superordinate 'identity leadership' factor) but also (b) from a theoretical perspective by allowing more refined conclusions in terms of the role that these different elements play in the leadership process and in predicting relevant outcomes.

Here we should note too that some of the theoretically consistent models we tested showed good fit in terms of some fit indices while showing marginal fit in terms of others (having said this, even these models showed better fit than any alternative models). In any case, future research should further refine the ILI in order to enhance psychometric properties by developing, in particular, a fourth item stem for the measure of impresarioship (as scales with four rather than three items tend to show greater

statistical support for separate factors and enhanced model fit; Hinkin & Tracey, 1999) as well as additional tools that can be useful in assessing these four dimensions (research that is currently underway; Steffens, Peters, Reutas, & Haslam, 2014).

Moreover, to gain a better and more nuanced understanding of the relevance of the each of the four leadership dimensions, much more research is needed to assess the role that social and organization context plays in determining the importance of each dimension. For example, the need for identity advancement and identity entrepreneurship may vary as a function of both the type of group that is being led (e.g., political vs. recreational), and the particular point in time at which it is encountered (e.g., before or after an election). Similarly, it is possible that in particular intragroup and intergroup contexts, the various identity leadership dimensions may not only exert additive but also interactive effects in influencing particular outcomes (e.g., in some cases, identity entrepreneurship and prototypicality may be particularly effective if they go hand in hand). Such issues can only be explored through work with a far broader range groups, contexts, and leadership outcomes than the present work encompasses (Yukl, 2012).

We also recognize, though, that in some research endeavors, it will not be feasible or desirable to assess leadership using a tool that comprises 15 items (e.g., due to time restrictions or the nature of the issues that are being investigated; see Postmes et al., 2013). In such circumstances, we recommend using those four items listed in Appendix B that — across the studies here — typically showed the highest loadings on their respective factor (while ensuring high internal consistencies — with αs in Study 2, 3 and 4 of .93, .92, and .85, respectively).

Here it is also important to discuss when (and for which purposes) this inventory should *not* be used. In particular, although it may be tempting to imagine that engaging in these four aspects of identity leadership is a recipe for success, this is not necessarily the case. Instead, there are a range of necessary and sufficient conditions that modulate the effectiveness of any of these dimensions — not the least of which is some detailed appreciation of the group whose identity is to be crafted, advanced, represented and embedded (see Haslam et al., 2011). In short, we would discourage potential users from seeing the four dimensions presented here as some kind of 'shopping list' that leaders simply need to evince in order to guarantee success. Most particularly, this is the case because we construe leadership as a dynamic, social-psychological process rather than as a matter of personal skills, traits, and attributes in the abstract.

Instead, researchers and practitioners intending to use the scale would be well advised to make themselves familiar with the broader context in which the scale is administered because this will contribute not only to its productive use but also to correct interpretation of its findings. For instance, in some organizational contexts it might be useful to be aware of, and first identify, those precise group memberships that matter to people in order to map the assessment of identity leadership onto those entities that are most relevant (e.g., by going through the process of Ascertaining Identity Resources (AIRing); Haslam, Eggins, & Reynolds, 2003). Appreciation of the wider social context should also be informative because the degree to which a leader is seen to engage in effective social identity management (i.e., motivating followers to contribute to group goals) is not set in stone but fluid and context-dependent (e.g., see Turner & Haslam, 2001). Thus, among other things, it is likely to depend on (a) the relationship of the leader with the group and with specific group members (e.g., high and low identifiers; Platow & van Knippenberg, 2001; van Dijke & De Cremer, 2008), (b) the comparative context (e.g., intragroup vs. intergroup; Platow, Grace, Wilson, Burton, & Wilson, 2008), and (c) the way in which identities are framed by other relevant organizational variables (e.g., gender; Eagly & Karau, 2002; Ryan, Haslam, Hersby, & Bongiorno, 2011). Indeed, we suggest that future research should investigate precisely these developmental and dynamic aspects of identity leadership (e.g., as argued by Haslam et al., 2011; Reicher et al., 2005), and in this regard, the utility of the ILI should derive precisely from its capacity to prove helpful in this endeavor.

Finally, in the present studies we relied on self-report data because this was necessary in the process of validating the scale in terms of its ability to meaningfully distinguish between followers' *perceptions* of the various facets of social identity management (and other measures). In order to develop a theoretically well-defined and accurate tool, construct and discriminant validity have been the focus here (Schriesheim & Cogliser, 2009). In this sense, common method bias may actually have provided a more conservative test of our ability to distinguish between the four dimensions of identity leadership. However, in order to enhance to the ILI's criterion validity, we see clear value in further research that would employ a multitude of methods (e.g., longitudinal design, self-other ratings, objective or behavioral outcomes) to refine and extend the observed relationships between the ILI's dimensions and relevant leadership outcomes.

Conclusion

The social identity approach to leadership has stimulated an important and exciting surge of research interest in recent years. Yet while this has served to advance a credible theory of leadership, to date the contribution of this work has been somewhat peripheral to the field as a whole. In part, this had been due to an overemphasis on leader prototypicality at the expense of other aspects of leaders' identity management. To address this lacuna, the present paper has expanded upon prior research and theory by developing and validating a novel instrument — the Identity Leadership Inventory (ILI) — that assesses the extent to which leaders not only represent but also create, advance, and embed a shared sense of 'us' (i.e., a shared social identity).

In this way, the ILI allows researchers and practitioners alike to assess and chart more richly the various ways in which leaders achieve influence by engaging with followers in ways that transform a psychology of 'you' and 'I' into a psychology of 'we' and 'us'. Going forward, we are excited about the prospect of empirical and theoretical projects that will employ this tool to furnish the field with a better, more detailed, and integrative understanding of these various facets of identity leadership as they are made manifest in leaders' and followers' efforts to work together to build the organizations and communities of the future.

Appendix A. Identity Leadership Inventory (ILI) [#]

Identity prototypicality: 'Being one of us'

1. This leader embodies what [the group] stands for.
2. This leader is representative of members of [the group].
3. * This leader is a model member of [the group].
4. This leader exemplifies what it means to be a member of [the group].

Identity advancement: 'Doing it for us'

5. This leader promotes the interests of members of [the group].
6. * This leader acts as a champion for [the group].
7. This leader stands up for [the group].
8. When this leader acts, he or she has [the group's] interests at heart.

Identity entrepreneurship: 'Crafting a sense of us'

9. This leader makes people feel as if they are part of the same group.
10. * This leader creates a sense of cohesion within [the group].
11. This leader develops an understanding of what it means to be a member of [the group].
12. This leader shapes members' perceptions of [the group's] values and ideals.

Identity impresarioship: 'Making us matter'

13. This leader devises activities that bring [the group] together.
14. This leader arranges events that help [the group] function effectively.
15. * This leader creates structures that are useful for [group members].

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Appendix B. Identity Leadership Inventory–Short Form (ILI–SF) [†#]

1. This leader is a model member of [the group].
2. This leader acts as a champion for [the group].
3. This leader creates a sense of cohesion within [the group].
4. This leader creates structures that are useful for [group members].

Note: [†] This includes the item from each of the four dimensions of identity leadership that across the studies typically showed the highest factor loading on the respective dimension (marked with * above) while also ensuring high internal consistencies.

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